

1. A transformer comprising:

a first inductor having one or more trenches and comprising a first conductor defining a signal path along the one or more trenches of the first inductor; and

a second inductor having one or more trenches and comprising a second conductor defining a signal path along the one or more trenches of the second inductor.

2. The transformer of claim 1, wherein the first inductor comprises one or more legs each having one or more trenches and the second inductor comprises one or more legs each having one or more trenches;

wherein the first conductor defines one or more signal paths each along one or more legs of the first inductor; and

wherein the second conductor defines one or more signal paths each along one or more legs of the second inductor.

3. The transformer of claim 2, wherein at least a portion of a leg of the second inductor is positioned between two legs of the first inductor.

4. The transformer of claim 2, wherein the first and second inductors are positioned side-by-side.

5. The transformer of claim 1, wherein the first and second inductors each comprise one or more magnetic layers.

6. The transformer of claim 5, wherein each magnetic layer comprises an amorphous cobalt alloy.

7. The transformer of claim 1, wherein the first inductor comprises one or more legs each having one or more trenches and the second inductor comprises one or more legs each having one or more trenches; and

wherein the first and second inductors each comprise one or more magnetic layers coupled to form magnetic strips extending across one or more legs of the first inductor and one or more legs of the second inductor.

8. A transformer comprising:

a substrate;

a patterned dielectric layer over the substrate, the patterned dielectric layer defining one or more trenches for a first inductor and one or more trenches for a second inductor;

a first conductor over the patterned dielectric layer, the first conductor defining a signal path along the one or more trenches for the first inductor; and

a second conductor over the patterned dielectric layer, the second conductor defining a signal path along the one or more trenches for the second inductor.

9. The transformer of claim 8, wherein the first conductor defines one or more signal paths each along one or more legs each having one or more trenches and the second conductor defines one or more signal paths each along one or more legs each having one or more trenches.

10. The transformer of claim 9, wherein at least a portion of a leg for the second conductor is positioned between two legs for the first conductor.

11. The transformer of claim 9, wherein the first and second conductors are positioned side-by-side.

12. The transformer of claim 8, comprising first and second magnetic layers over the patterned dielectric layer, wherein the first conductor lies over the first magnetic layer and the second conductor lies over the second magnetic layer.

13. The transformer of claim 12, wherein each magnetic layer comprises an amorphous cobalt alloy.

14. The transformer of claim 8, comprising another dielectric layer over the first and second conductors and first and second magnetic layers over the other dielectric layer, wherein the first magnetic layer lies over the first conductor and the second magnetic layer lies over the second conductor.

15. The transformer of claim 14, wherein each magnetic layer comprises an amorphous cobalt alloy.

16. The transformer of claim 12, comprising another dielectric layer over the first and second conductors and third and fourth magnetic layers over the other dielectric layer, wherein the third magnetic layer lies over the first conductor and the fourth magnetic layer lies over the second conductor.

17. The transformer of claim 16, wherein the first conductor defines one or more signal paths each along one or more legs each having one or more trenches and the second conductor defines one or more signal paths each along one or more legs each having one or more trenches; and

wherein the first, second, third, and fourth magnetic layers are coupled to form magnetic strips extending across one or more legs for the first conductor and one or more legs for the second conductor.

18. A method comprising:

forming a patterned dielectric layer over a substrate, the patterned dielectric layer defining one or more trenches for a first inductor and one or more trenches for a second inductor;

forming a first conductor over the patterned dielectric layer for the first inductor such that the first conductor defines a signal path along the one or more trenches for the first inductor; and

forming a second conductor over the patterned dielectric layer for the second inductor such that the second conductor defines a signal path along the one or more trenches for the second inductor.

19. The method of claim 18, wherein the forming the first conductor comprises forming the first conductor to define one or more signal paths each along one or more legs each having one or more trenches; and

wherein the forming the second conductor comprises forming the second conductor to define one or more signal paths each along one or more legs each having one or more trenches.

20. The method of claim 19, wherein the forming the first and second conductors comprises forming the first and second conductors such that at least a portion of a leg for the second conductor is positioned between two legs for the first conductor.

21. The method of claim 19, wherein the forming the first and second conductors comprises forming the first and second conductors such that the first and second conductors are positioned side-by-side.

22. The method of claim 18, comprising forming first and second magnetic layers over the patterned dielectric layer;

wherein the forming the first conductor comprises forming the first conductor over the first magnetic layer; and

wherein the forming the second conductor comprises forming the second conductor over the second magnetic layer.

23. The method of claim 22, wherein the forming the first and second magnetic layers comprises forming each magnetic layer with a magnetic material comprising an amorphous cobalt alloy.

24. The method of claim 18, comprising:

forming another dielectric layer over the first and second conductors; and

forming first and second magnetic layers over the other dielectric layer such that the first magnetic layer lies over the first conductor and the second magnetic layer lies over the second conductor.

25. The method of claim 24, wherein the forming the first and second magnetic layers comprises forming each magnetic layer with a magnetic material comprising an amorphous cobalt alloy.

26. The method of claim 22, comprising:

forming another dielectric layer over the first and second conductors; and

forming third and fourth magnetic layers over the other dielectric layer such that the third magnetic layer lies over the first conductor and the fourth magnetic layer lies over the second conductor.

27. The method of claim 26, wherein the forming the first conductor comprises forming the first conductor to define one or more signal paths each along one or more legs each having one or more trenches;

wherein the forming the second conductor comprises forming the second conductor to define one or more signal paths each along one or more legs each having one or more trenches; and

wherein the forming the first, second, third, and fourth magnetic layers comprises forming the first, second, third, and fourth magnetic layers such that the first, second, third, and fourth magnetic layers are coupled to form magnetic strips extending across one or more legs for the first conductor and one or more legs for the second conductor.

28. A transformer comprising:

a substrate;

a patterned dielectric layer over the substrate, the patterned dielectric layer defining a first leg having one or more trenches and a second leg having one or more trenches;

a conductor over the patterned dielectric layer, the conductor defining a signal path along each leg of one or more trenches; and

a voltage tap conductively coupled to the conductor between the first and second legs.

29. The transformer of claim 28, comprising a magnetic layer over the patterned dielectric layer, wherein the conductor lies over the magnetic layer.

30. The transformer of claim 29, wherein the magnetic layer comprises an amorphous cobalt alloy.

31. The transformer of claim 28, comprising another dielectric layer over the conductor and a magnetic layer over the other dielectric layer, wherein the magnetic layer lies over the conductor.

32. The transformer of claim 31, wherein the magnetic layer comprises an amorphous cobalt alloy.

33. The transformer of claim 29, comprising another dielectric layer over the conductor and another magnetic layer over the other dielectric layer, wherein the other magnetic layer lies over the conductor.



34. A method comprising:

forming a patterned dielectric layer over a substrate, the patterned dielectric layer defining a first leg having one or more trenches and a second leg having one or more trenches;

forming a conductor over the patterned dielectric layer, the conductor defining a signal path along each leg of one or more trenches; and

tapping a voltage potential from the conductor between the first and second legs.

35. The method of claim 34, comprising forming a magnetic layer over the patterned dielectric layer;

wherein the forming the conductor comprises forming the conductor over the magnetic layer.

36. The method of claim 35, wherein the forming the magnetic layer comprises forming the magnetic layer with a magnetic material comprising an amorphous cobalt alloy.

37. The method of claim 34, comprising:

forming another dielectric layer over the conductor; and

forming a magnetic layer over the other dielectric layer such that the magnetic layer lies over the conductor.

38. The method of claim 37, wherein the forming the magnetic layer comprises forming the magnetic layer with a magnetic material comprising an amorphous cobalt alloy.

39. The method of claim 35, comprising:

forming another dielectric layer over the conductor; and

forming another magnetic layer over the other dielectric layer such that the other magnetic layer lies over the conductor.